AMENDMENTS TO THE CLAIMS

The following listing of the claims replaces all prior versions and listings of the claims in relation to the present patent application. Applicants note that the following listing of the claims reflects changes made to the claims from as they were when previously entered on or about October 24, 2004. Thus, the following listing of the claims reflects that the amendments presented by Applicants in the Response the Examiner alleged as non-compliant were not entered.

Listing of the Claims

1. (currently amended): ~~An~~ A portable induction heating system, comprising in a portable unit:

a ~~portable~~ power source electrically coupleable to a fluid-cooled induction heating cable and operable ~~to convert incoming power to controlled frequency output power~~ to produce a varying magnetic field;

a ~~portable,~~ programmable power source controller coupled to the ~~portable~~ power source for regulating the power conversion; and

a ~~portable~~ cooling unit fluidically coupleable to the fluid-cooled induction heating cable for recycling a cooling fluid through the cable and around a workpiece to cool the fluid-cooled induction heating cable.

2. (previously presented): The system as recited in claim 1, comprising a flexible fluid-cooled induction heating cable.

3. (currently amended): The system as recited in claim 1, wherein the fluid-cooled induction heating cable is coupled via connector assemblies to the ~~portable~~ power source and ~~portable~~ cooling unit.

4. (previously presented): The system as recited in claim 3, wherein the power source controller is operable to control power from the power source to produce a desired temperature profile in the workpiece.

5. (original): The system as recited in claim 2, wherein the induction heating system is operable to preheat a workpiece before welding and to relieve stress from the workpiece after welding.

6. (original): The system as recited in claim 1, comprising a wheeled cart, wherein the power source and cooling unit are disposed on the wheeled cart.

7. (canceled)

8. (original): The system as recited in claim 1, comprising a temperature feedback device operable to provide an electrical signal representative of workpiece temperature.

9.-46. (cancelled)

47. (currently amended): A portable heating system, comprising in a portable unit:

a power source operable ~~to convert incoming power to controlled frequency output power and~~ to apply ~~the~~ output power to inductively heat a workpiece;

a power source controller operable to control the heating of a workpiece in response to programming instructions provided by a user to produce a desired temperature profile in the workpiece; and

a cart operable to transport the power source and power source controller to the workpiece.

48. (original): The system as recited in claim 47, wherein the system is an induction heating system.

49. (original): The system as recited in claim 47, comprising a fluid-cooled induction heating cable.

50. (original): The system as recited in claim 47, comprising a cooling unit operable to provide a flow of cooling fluid, the cooling unit being disposed on the cart.

51. (original): The system as recited in claim, 47, comprising a temperature feedback device operable to produce a signal representative of workpiece temperature to the power source controller.

52. (original): The system as recited in claim 47, wherein the power source controller uses PID control.

53. (original): The system as recited in claim 47, wherein the power source controller uses PI control.

54. (original): The system as recited in claim 47, wherein the system is operable to raise the temperature of a workpiece to a first temperature and lower the temperature of the workpiece from the first temperature to a second temperature at a desired rate.

55. (original): The system as recited in claim 47, comprising an insulation blanket having a visible line to enable the insulation blanket to be aligned with a weld joint.

56. (cancelled)

57. (currently amended): ~~An~~ A portable induction heating system, comprising in a portable unit:

a ~~portable~~ power source electrically coupleable to a portable fluid-cooled induction heating cable and operable to ~~convert incoming power to controlled frequency~~ provide output power to produce a varying magnetic field;

a ~~portable~~ programmable controller operable to control induction heating; and

a ~~portable~~ cooling unit fluidically connected to the ~~portable~~ fluid-cooled induction heating cable to cool the fluid-cooled induction heating cable via a cooling fluid, wherein the cooling unit dissipates heat in the cooling fluid and wherein the cooling unit recycles the cooling fluid to cool the induction heating cable.

58. (currently amended): The system as recited in claim 57, wherein the ~~portable~~ programmable controller comprises a plurality of visual indicators.

59. (currently amended): The system as recited in claim 57, wherein the fluid-cooled induction heating cable is connected via connector assemblies to the ~~portable~~ power source and ~~portable~~ cooling unit.

60. (currently amended): The system as recited in claim 57, wherein the ~~portable~~ programmable controller is operable to control induction heating to produce a desired temperature profile in a workpiece.

61. (previously presented): The system as recited in claim 57, wherein the induction heating system is operable to preheat a workpiece before welding and to relieve stress from the workpiece after welding.

62. (previously presented): The system as recited in claim 57, comprising a wheeled cart, wherein the power source and cooling unit are disposed on the wheeled cart.

63. (canceled):

64. (previously presented): The system as recited in claim 57, comprising a temperature feedback device operable to provide an electrical signal representative of a workpiece temperature.

65. (previously presented): The system, as recited in claim 64, wherein the electrical signal representative of the workpiece temperature from the temperature feedback device is sent to the programmable controller.

66. (previously presented): The system as recited in claim 57, wherein the programmable controller uses proportional-integral-derivative (PID) control.

67. (previously presented): The system as recited in claim 57, wherein the programmable controller uses proportional-integral (PI) control.

68. (currently amended): A portable induction heating system, comprising in a portable unit:

a power source operable ~~and operable to convert incoming power to controlled variable frequency output power and~~ to ~~apply~~ provide output power ~~the output~~ to inductively heat a workpiece;

a temperature controller operable to control the induction heating of the workpiece in response to programming instructions provided by a user to produce a desired temperature profile in the workpiece; and

a cart operable to transport the power source and temperature controller to the workpiece.

69. (previously presented): The system as recited in claim 68, wherein the temperature profile is configured for post-weld stress relief of the workpiece.

70. (previously presented): The system as recited in claim 68, comprising a fluid-cooled induction heating cable.

71. (previously presented): The system as recited in claim 68, comprising a cooling unit operable to provide a flow of cooling fluid, the cooling unit being disposed on the cart.

72. (previously presented): The system as recited in claim, 68 comprising a temperature feedback device operable to produce a signal representative of workpiece temperature to the temperature controller.

73. (previously presented): The system as recited in claim 68, wherein the temperature controller uses proportional-integral-derivative (PID) control.

74. (previously presented): The system as recited in claim 68, wherein the temperature controller uses proportional-integral (PI) control.

75. (previously presented): The system as recited in claim 68, wherein the system is operable to raise the temperature of a workpiece to a first temperature and lower the temperature of the workpiece from the first temperature to a second temperature at a desired rate.

76. (previously presented): The system as recited in claim 68, comprising an insulation blanket having a visible line to enable the insulation blanket to be aligned with a weld joint.

77. (currently amended): The system as recited in claim 70, wherein the fluid-cooled induction heating cable is connected via connector assemblies to the ~~portable~~ power source.

78. (currently amended): The system as recited in claim 71, wherein a fluid-cooled induction heating cable is connected via connector assemblies to the ~~portable~~ cooling unit.

79. (currently amended): ~~An~~ A portable induction heating system, comprising in a portable unit:

a ~~portable~~ power source electrically coupleable to a fluid-cooled induction heating cable and operable to ~~convert incoming power to controlled frequency output power to~~ produce a varying magnetic field in cooperation with the fluid-cooled induction heating cable;

a ~~portable~~ programmable power source controller coupled to the portable power source for regulating the power conversion; and

a ~~portable~~ cooling unit fluidically connected to the fluid-cooled induction heating cable to cool the fluid-cooled induction heating cable, wherein the cooling unit recycles cooling fluid received from the fluid-cooled induction heating cable to the fluid-cooled induction heating cable.

80. (previously presented): The system as recited in claim 79, comprising a flexible fluid-cooled induction heating cable.

81. (currently amended): The system as recited in claim 79, wherein the fluid-cooled induction heating cable is coupled via connector assemblies to the ~~portable~~ power source and ~~portable~~ cooling unit.

82. (currently amended): The system as recited in claim 79, wherein the ~~portable~~ programmable power source controller is operable to control power from the power source to produce a desired temperature profile in the workpiece.

83. (previously presented): The system as recited in claim 79, wherein the induction heating system is operable to preheat a workpiece before welding and relieve stress from the workpiece after welding.

84. (previously presented): The system as recited in claim 79, comprising a wheeled cart, wherein the power source and cooling unit are disposed on the wheeled cart.

85. (currently amended): The system as recited in claim 79, wherein a ~~portable~~ power source controller is disposed on the wheeled cart.

86. (previously presented): The system as recited in claim 79, comprising a temperature feedback device operable to provide an electrical signal representative of workpiece temperature.

87. (currently amended): A portable heating system, comprising in a portable unit:

a power source operable to ~~convert incoming power to controlled frequency output power and to~~ apply output power to inductively heat a workpiece via a fluid-cooled induction heating cable;

a controller operable to control the heating of the workpiece in response to programming instructions for producing a desired temperature profile in the workpiece; ~~and~~

a cooling unit configured for fluid communication with the fluid-cooled induction heating cable, the cooling unit and fluid-cooled induction heating cable cooperating to produce a closed-loop for recycling cooling fluid; and

a cart operable to transport the power source, cooling unit, and controller to the workpiece.

88-90 (cancelled).

91. (previously presented): The system as recited in claim 87, comprising a temperature feedback device operable to produce a signal representative of workpiece temperature to the controller.

92. (previously presented): The system as recited in claim 87, wherein the controller uses proportional-integral-derivative (PID): control.

93. (previously presented): The system as recited in claim 87, wherein the controller uses proportional-integral (PI): control.

94. (previously presented): The system as recited in claim 87, wherein the controller is operable to raise the temperature of a workpiece to a first temperature and lower the temperature of the workpiece from the first temperature to a second temperature at a desired rate.